United States Environmental Protection Agency
Office of Water
Office of Wastewater Management
Municipal Assistance Branch

Wastewater Treatment Plant Operator
On-Site Technical Assistance Training Program - 104(g)(1)
Mid-Fiscal Year 2001 Accomplishment Report

July 2001

Recent Programmatic Achievements:

The Wastewater Treatment Plant Operator On-Site Technical Assistance Training Program / 104(g)(1) assisted **640** facilities by mid-fiscal year 2001 (October 1, 2000 through March 31, 2001). **Five hundred and thirty seven (537)** of these facilities have or are in the process of achieving, maintaining, or improving overall plant performance.

TOTAL NUMBER OF FACILITIES ASSISTED IN EACH REGION:

REGION	1	2	3	4	5	6	7	8	9	10
TOTAL	*53*	*23*	*90*	*78*	*86*	*98*	*67*	*60*	*36*	*49*

Two hundred and four (204) of these facilities completed training by mid-fiscal year 2001, **191** of which achieved or maintained compliance, or improved performance, a **94%** success rate. **Thirteen (13)** facilities had no improvement, and have decided to try and achieve compliance at their wastewater treatment plants through alternative methods. The remaining **436** facilities are continuing Program training and are in the process of achieving or maintaining compliance, or improving overall plant performance.

Note that a number of these facilities were also assisted in fiscal year 2000. Clarification as to the exact number of "carry-over" facilities will be reported in the end of the fiscal year 2001 accomplishment report.

Success Story:

Ketchikan, Alaska

The Forest Park Wastewater Treatment Plant is located approximately five miles south of the City of Ketchikan, Alaska. The plant discharges into the marine waters of Alaska's "Inside Passage," which is known for its pristine waters and significant sport and commercial fisheries. The plant's service district has approximately two hundred connections with even more planned in the immediate future. Access to the community is limited to air and boat, as there are no roads into the greater Ketchikan area.

In 1999 the Ketchikan Gateway Borough (KGB) elected to discontinue its contract with its private operations and maintenance service provider. The treatment plant was in very poor condition when the KGB resumed the daily operation of the plant. Poor conditions were largely due to the lack of housekeeping and maintenance, along with the lack of process control procedures. Furthermore, the facility apparently did not have any records for process control or compliance testing. In addition, the private contractor had not been submitting discharge monitoring reports to the State regulatory agency on a regular basis. The 104(g) Program assistance provider for the State of Alaska's Department of Environmental Conservation was contacted and informed that the KGB had resumed operations and maintenance of the facility. The 104(g) Program trainer began working with KGB management and operation staff to quickly formulate a plan to bring the plant back into compliance. After the first on-site visit, it was determined that the first thing that needed to be done was a thorough cleaning of the plant.

The initial visit revealed a treatment plant that had been grossly neglected for an extended period of time. The treatment plant was strewn from one end to the other with screenings (stored in plastic garbage cans) that had not been removed for many years. At some point, the comminutor had failed and instead of repairing the unit it was removed from service and the chlorination equipment had also been removed and was no where to be found. There were no operating records, and there was no way of knowing if any maintenance had occurred at the plant. The clarifiers were in such poor condition, with old matted solids floating on the surface, that when a shovel was inserted it stood up. After the solids layer was removed it revealed that the weir structures were broken and hanging down into the clarifier, essentially not functioning as designed. Upon further investigation it was found that all aeration basins in the plant had a huge build up of septic sludge and grit in them, which substantially decreased the plant's treatment volume. Several of the basins had such a severe accumulation of solids that the aeration headers were covered in grit and sludge and were rendered ineffective.

The main priority at the plant was to haul all the old screenings that had accumulated on-site to the local landfill for proper disposal. The local septage hauler was contracted to haul all grit and septic sludge from the facility. The treatment plant was then configured in parallel trains to enable one side to be cleaned while the other provided ongoing treatment. Septic sludge and grit were systematically removed from the aeration basins, clarifiers, and chlorine contact chambers. It was estimated that approximately 50,000 gallons of septic material was hauled to the City of Ketchikan's wastewater treatment plant for final solids handling procedures. Operations personnel quickly repaired the effluent weir structures while the clarifiers were being cleaned. All work was accomplished without interruption to the treatment process and no bypasses of treatment were allowed.

Upon departure from the Forest Park facility, the quality of the effluent had greatly improved. KGB operators are attempting to bring the mixed liquor suspended solids concentration back up to 2400-2600 mg/L, and this is being accomplished by setting the return activated sludge rates to 100 percent during the initial startup period. The treatment plant was reseeded with a commercial seed stock, in an effort to accelerate the formation of microorganisms that are essential in the activated sludge process.

The State of Alaska's 104(g) Program trainer, through a concerted effort with the KGB's management and the operations staff, made significant improvements at the Forest Park facility. Process control and compliance testing is currently being conducted on a regular basis. A new comminutor, flow monitoring equipment, and a sludge press are to be purchased and installed this year.

This is just one of the many examples of the value of the Wastewater Treatment Plant Operator On-Site Technical Assistance Training Program - 104(g)(1).

If you have any question, comments, or require more information on this subject matter please do not hesitate to contact Curt Baranowski at 202-564-0636 or via E-mail at baranowski.curt@epa.gov. You may access this Program's Internet web-page at www.epa.gov/owm/tomm.htm.